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SIEMENS CORPORATION
INTELLECTUAL PROPERTY DEPARTMENT
170 WOOD AVENUE SOUTH
ISELIN, NJ 08830

EXAMINER	
PROCTOR, JASON SCOTT	
ART UNIT	**PAPER NUMBER**
2123	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,210	BECK, HANS-JOACHIM	
	Examiner	Art Unit	
	JASON PROCTOR	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *10-13 and 15-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *10-13 and 15-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 July 2008* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claims 10-18 were rejected in the Office Action entered on 21 April 2008.

Applicants' response filed on 21 July 2008 has amended claims 10, 11, 13, 15, 17, and 18; canceled claim 14; and presented new claims 19-22. Claims 10-13 and 15-22 are pending in this application.

Claims 10-13 and 15-22 are rejected.

Drawings

1. The previous objections to the drawings are withdrawn in response to the replacement drawing sheets submitted on 21 July 2008.

Claim Rejections - 35 USC § 112

2. The previous rejection of claim 13 under 35 U.S.C. § 112, second paragraph, is withdrawn in response to the amendments to the claim.

Response to Arguments – 35 USC § 102

3. In response to the previous rejection of claims 10-18 under 35 U.S.C. § 102 as being anticipated by Heile, Applicants argue primarily that:

> Although hardware in the present process control system includes programmable controllers 6, which may include PLDs, they are only a subset of the claimed process control system. This is clarified by amendments herein. Therefore Heile does not teach the remaining process control design features of the present invention as claimed.

The Examiner has fully considered this argument and finds it persuasive. Heile does not expressly disclose the claim limitation "wherein the project design blocks comprise software objects representing operating and observation systems, input and output modules, the actuators, the sensors, and software blocks for creating control programs for the programmable controllers." The previous rejections under 35 U.S.C. § 102 have been withdrawn. New grounds of rejection are entered below.

4. Applicants further argue that:

> [Heile teaches] copying of files from locally modified files to a global work space. In contrast, Applicant claims copying of files from a central library to programming devices for local modification.

The Examiner respectfully traverses this argument as follows.

Heile clearly discloses copying files from a central library to programming devices for local modification. See Heile, FIG. 13 and related disclosure.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. § 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 10-13 and 15-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over US Patent No. 6,298,319 to Heile et al. (hereafter referred to as Heile) in view of US Patent No. 6,108,662 to Hoskins et al. (hereafter referred to as Hoskins).

Regarding claim 10, Heile teaches:

A method of designing or configuring a project representing automation equipment for controlling a plant [*As used herein, "electronic design" refers to a design for circuit boards and systems including multiple electronic devices and multi-chip modules, as well as integrated circuits. For convenience, the following discussion will generally refer to "integrated circuits", or to "PLDs", although the invention is not so limited."* (column 4, line 64, et seq.)], the method comprising:

Storing project design blocks in a central library of a memory unit assigned to an engineering system, the memory unit connected via a bus system to a programming device of the engineering system, the programming device configured to store copies of such project design blocks required for designing or configuring the project [*"A project includes a project file, design files, assignment files, and simulation files, together with hierarchy information, system settings, and output files, which includes programming files and report files. A project database may also exist, which contains intermediate data structures and version information."* (column 5, lines 40-47); *"FIG. 13 is a flowchart 500 illustrating a technique by which a user may modify*

a project source file using an embodiment of the present invention. In step 502, the system receives a command from the user to check out file A from the global work space... Once modifications are completed, the user issues a command to check in file A in step 514." (column 18, lines 35-65)];

Saving references on the programming device, the references indicating which project design blocks are to be copied from the library to the programming device [*"However, if file A is not locked, then in step 508 a lock flag is set for file A in the global work space and file A is indicated as being locked by the user requesting modification. Next, in step 510 file A is copied to the local work space of the user as a file that may be written to. In step 512, the user is then able to modify file A in his local work space."* (column 18, lines 35-65)];

Copying the design blocks to be copied from the library to the programming device based on the references, by the engineering system (column 18, lines 35-65);

Transferring the copied design blocks to the programming device, by the engineering system (column 18, lines 35-65); and

Storing the transferred design blocks on the programming device [*"The global work space can, for example, use a central project database directory as the directory that contains the last officially checked in version of all source files, and the last officially checked in version of processing operation results for those files"* (column 8, line 62, et seq.)].

Heile does not expressly disclose Applicants' claimed ***intended use*** that the "project" is "a process control system of actuators, sensors, programmable controllers, and operating and observation stations," and that "project design blocks comprise software objects representing

operating and observation systems, input and output modules, the actuators, the sensors, and software blocks for creating control programs for the programmable controllers."

Hoskins teaches a system software solution for controlling an enterprise comprising one or more components for controlling one or more aspects of an industrial environment with code that creates a database of components, each of the components containing control, diagnostic and resource information pertaining to enterprise resources utilized in the industrial environment (abstract).

Hoskins teaches that "programmable controllers are well-known systems for operating industrial equipment, such as assembly lines and machine tools, in accordance with a stored program. In these controllers, a stored program is executed to examine the condition of specific sensing devices on the controlled equipment, and to energize or de-energize selected operating devices on that equipment contingent upon the status of one or more of the examined sensing devices." (column 1, lines 25-37)

Hoskins teaches that "In the automotive industry, various automotive parts are conveyed along machine lines consisting of many consecutive workstations… The machine line may consist of any number of different stations, each station performing a different procedure on the unfinished block." (column 1, lines 38-54).

Hoskins teaches that "In this type of system, **a programmable controller would receive inputs from all of the various tools at all of the workstation and would provide activating output signals to synchronize the machine operation**." (column 1, lines 55-64).

Hoskins teaches **actuators and sensors** (column 3, lines 1-14).

To solve problems in the prior art of programming an industrial control system, Hoskins teaches that "Manufacturing customers have long desired an integrated environment for generating an initial design schematic specifying a functional description of a manufacturing environment without the need for specifying product and manufacturing details. The system is provided with a designer studio that utilizes a common database of pre-architected modules to integrate a total system solution for the enterprise." (column 4, lines 20-29).

Therefore, Hoskins teaches a process control system of actuators, sensors, programmable controllers, and operating and observation stations, and Hoskins teaches that when programming the programmable controllers, project design blocks comprise software objects representing operating and observation systems, input and output modules, the actuators, the sensors, and software blocks for creating control programs for the programmable controllers.

Heile and Hoskins are analogous art because both are directed to provided a system for programming a programmable controller.

It would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Heile with Hoskins as expressly motivated by Hoskins to provide an easier to use system for programming the controllers (column 4, lines 20-49). Hoskins teaches that the inputs and outputs of the programmable controller correspond to sensors, actuators, and other tools at the workstations (shown above, column 1, lines 55-64).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time of Applicants' invention to combine the teachings of Heile and Hoskins to arrive at the invention specified in claim 10.

Regarding claim 11, Heile discloses that the programming device has at least one of the project design blocks required for designing or configuring the project before the copied design blocks are transferred, the method further comprising:

Comparing a software version of the at least one project design block to a software version of a corresponding project design block stored in the library and replacing upon a request by a user the at least one project design block with a copy of the corresponding project design block stored in the library, if the software version of the at least one project design block is older than the software version of the corresponding project design block stored in the library [*"By way of example, an EDA tool may have a complete version control system custom built into the central database... Also, an EDA tool may have built in support for several of the major and most popular version control systems such as PVCS, RCS and SCCS."* (column 13, lines 4-17); *"With this linear list, it is possible to bring an old version to the end of the list and to thus, undo all the edits between the most recent version and the old version."* (column 13, lines 18-30)].

Regarding claim 12, Heile discloses erasing at least one of the references on the programming device, and blocking the replacement of such project design block corresponding to the erased reference [*"When version control is being used, files from one user's point of view may have the following states: default, locked, owned-write and owned-read only, although other*

file states are possible." (column 14, lines 5-9); *"Having a file in this owned-read only state prevents any accidental writing to the file, and is useful if a user does not wish a file to be automatically updated."* (column 14, line 64, et seq.)].

Regarding claim 13, Heile discloses that the project is subdivided into a plurality of part projects, the part projects designed on a plurality of programming devices connected to each other [FIG. 1 and related description];

The user request is displayed on each programming device [*"Assignment file 462 is an ASCII text file located on disk in one embodiment. This file 462 contains a user readable version of the current state of assignments of the project, and may show the hierarchical path for each assignment."* (column 17, lines 54-64)]; and

The at least one project design block is replaced by the corresponding project design block stored in the library only if the user request is accepted by the users of all programming devices [*"Step 516 first determines whether file A has, in fact, been locked by the user requesting to check it in. If the user requesting that file A be checked in had not locked file A, then in step 518 an error message is returned and the procedure ends. However, if the user is the same, then in step 520 file A is copied back up to the global work space and rewrites the older version of file A. In step 522, file A is changed from a locked state for that user to a default state. Finally, in step 524, the lock flag for file A for that user is cleared from the global work space. In this way, users may modify source files in a project design in a coordinated fashion."* (column 18, lines 53-65)].

Claims 15-17 and 19 recite a system for performing the method of claims 10-13. A system is disclosed by Heile [FIG. 1]. Claims 15-17 and 19 are rendered obvious over Heile in view of Hoskins for rationale similar to that shown above regarding claims 10-13.

Claim 18 recites a device for performing the method of claim 10. A device is disclosed by Heile [FIG. 1]. Claim 18 is rendered obvious over Heile in view of Hoskins for rationale similar to that shown above regarding claim 10.

Regarding claim 20, Heile teaches that the management unit defines a plurality of parts of a project for designing or configuration the process control system, each part comprising a given subset of the project design blocks, wherein the project parts are differently assigned to at least two of the programming devices [*"Step 504 determines whether file A is currently locked in the global work space. If file A is currently locked, this indicates that another user is currently modifying file A."* (column 18, lines 35-65).

Regarding claim 21, Heile teaches that the software tool protects certified copies of the design blocks in a given programming device from being inadvertently updated by canceling the references to the certified copies while maintaining references to any of the project design blocks required for expansion of the process control system, wherein current project design blocks are only copied from the management unit to the given programming device that are needed for the expansion [*"Step 504 determines whether file A is currently locked in the global work space. If file A is currently locked, this indicates that another user is currently modifying file A. In this*

situation, the requesting user may not check out file A and in step 506 an error message is returned and the procedure is done." (column 18, lines 35-65)].

Regarding claim 22, Heile teaches a software routine on the management unit that transmits a user prompt to all of the programming devices when any of the programming devices requests an updated one of the project design blocks, wherein the software routine requires acceptance of the updated design block by a user of each of the programming devices via user input in response to the user prompt, wherein after receiving said acceptance of the software routine transmits said updated one of the project design blocks to all of the programming devices, wherein a given revision level for said one of the project design blocks is synchronized on all of the programming devices ["*FIG. 14 is a flowchart 600 illustrating a technique by which a source file may be automatically retrieved from the global work space to a user's local work space. In step 602, a triggering event is received for the automatic retrieval of project source file A from the global work space to a user's local work space. A trigger event may take a wide variety of forms. By way of example, a triggering event ... may occur upon notification from the global work space that file A has changed. Once the trigger has been received, then in step 604 it is determined whether the file A is in fact in a default state for that user and that a new flag has not been set for file A. If file A is not in a default state for a particular user, then that file will not be automatically retrieved.* [...] *If the result is YES from step 604, then in step 606 it is determined whether the file A version in the global work space is a newer version than file A version in the user's local work space... If the results is YES, then in step 608 file A from the global work space is copied automatically to the user's local work space. In this fashion, a local*

project source file in a default state is automatically updated with recent versions of that file from the global work space." (column 18, line 66 – column 19, line 26)].

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason Proctor whose telephone number is (571) 272-3713. The examiner can normally be reached on 8:30 am-4:30 pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached at (571) 272-3753. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: 571-272-2100. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Proctor
Examiner
Art Unit 2123

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/Paul L Rodriguez/

Supervisory Patent Examiner, Art Unit 2123